

**IN THE CLAIMS:**

Amend the following claims:

1. (cancelled)
2. (currently amended) An objective lens ~~according to claim 1, further including:~~  
~~an optical element made of a medium that shows an internal transmittance of at least 50% through a thickness of 10mm for a wavelength of 300nm; and~~  
~~at least one diffractive optical element constructed of a medium used as having a substrate, having made of a medium that shows an internal transmittance of at least 50% [[at]] through a thickness of 10mm for a wavelength of 300 nm when a thickness is 10 mm.~~
3. (currently amended) An objective lens according to claim [[1]] 2, wherein the diffractive optical element is optimized to take advantage of a fluorescent wavelength.
4. (currently amended) An objective lens according to claim [[1]] 2, ~~further including at least one cemented lens component made up of having lens elements having made of media of different refractive indices and Abbe's numbers.~~
5. (currently amended) An objective lens according to claim [[1]] 2, wherein an NA of the objective lens where correction for aberration is made and an NA of the objective lens where [[the]] ~~an~~ effective diameter is determined are different from each other to satisfy the following condition:  
$$NAe > 1.5 \times NAc$$
where  $NAe$  is the NA of the objective lens where the effective diameter is determined and  $NAc$  is the NA of the objective lens where correction for aberration is made.
6. (currently amended) An objective lens according to claim [[1]] 2, constructed as a water-immersion objective lens in which ~~the~~ ~~an~~ NA of the objective lens where [[the]] ~~an~~ effective diameter is determined is at least 0.6.

7. (currently amended) An objective lens according to claim [[1]] 2, wherein an optical path length extending along an optical axis is 20 mm or less.
8. (currently amended) An objective lens according to claim [[1]] 2, wherein group delay dispersion relating to an axial ray of light is 1000 f sec<sup>2</sup> or less.
9. (currently amended) An objective lens according to claim [[1]] 2, wherein at least one of the medium media that show an internal transmittance of at least 50% through a thickness of 10mm for a wavelength of 300nm is quartz or fluorite.
10. (currently amended) An objective lens according to claim [[1]] 2, comprising, in order from an object side[[,]]:  
a plano-convex lens made of quartz, with a convex surface facing an image side; a positive meniscus lens made of quartz, with a convex surface facing the image side; a cemented doublet of a negative meniscus lens made of quartz and a biconvex lens made of fluorite; and a diffractive optical element.
11. (currently amended) An objective lens according to claim [[1]] 2, wherein a wavelength region of the objective lens where for which correction for aberration aberrations is made is a near-infrared region.
12. (currently amended) An objective lens according to claim [[1]] 2, wherein correction for aberration aberrations is made in accordance with for each wavelength region which is a near infrared region and has band having a bandwidth of at least 30 nm in a near infrared region, and a best position in each wavelength region band varies.
13. (currently amended) An objective lens according to claim [[1]] 2, exclusively used in a multiphoton microscope.
14. (currently amended) An objective lens according to claim 5, wherein a region from a center of [[a]] the diffractive optical element to the numerical aperture NAc is different from a region

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from the numerical aperture NAc to the numerical aperture NAe in diffraction efficiency or focal length of the diffractive optical element.